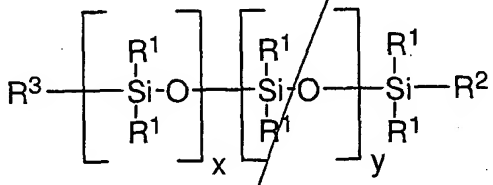
10/069463
JC19 Rec'd PCT/PTO 26 FEB 2002

We claim:

1. The use of an polymer obtainable by free-radical polymerization of a monomer mixture of

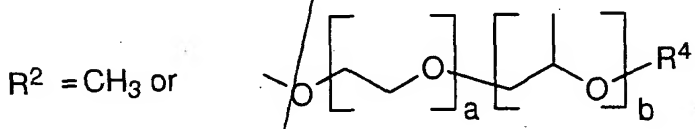
(a) ethylenically unsaturated monomers

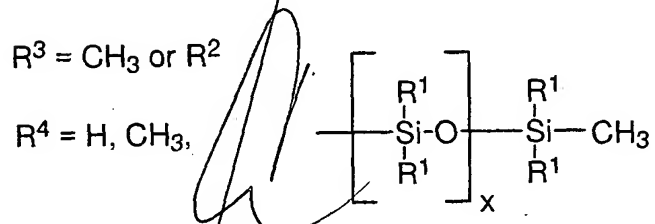
(b) polyalkylene oxide-containing silicone derivatives of the formula I:

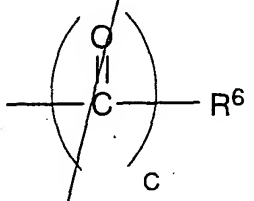


(I)

where:

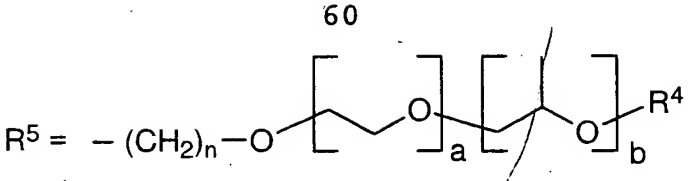






R^6 is an organic radical having 1 to 40 carbon atoms which can contain amino, carboxylic acid or sulfonate groups, or, for the case c=0, is also the anion of an inorganic acid,

and where the radicals R^1 may be identical or different, and either originate from the group of aliphatic hydrocarbons having 1 to 20 carbon atoms, are cyclic aliphatic hydrocarbons having 3 to 20 carbon atoms, are of an aromatic nature or are identical to R^5, where:

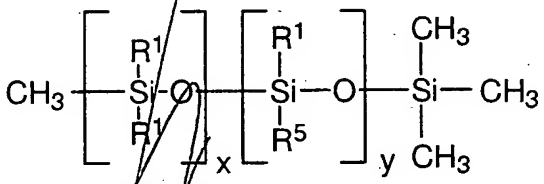


with the proviso that at least one of the radicals R^1, R^2 or R^3 is a polyalkylene oxide-containing radical according to the above definition,

and n is an integer from 1 to 6,
x and y are integers such that the molecular weight of the polysiloxane block is between 300 and 30,000,
a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0, and c is 0 or 1.

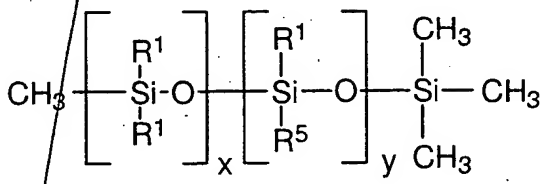
in pharmaceutical preparations.

2. The use as claimed in claim 1, wherein formula I has the following meaning:



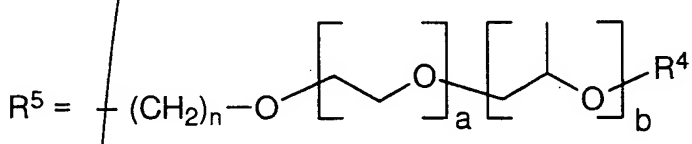
where R^1 and R^5 have the meanings given in claim 1.

3. The use as claimed in claim 2, wherein formula I has the following meaning



where

$R^1 = -CH_3$



R^4 = -H; $-COCH_3$, alkyl with C_1-C_4

n = 1 to 6, in particular 2 to 4

x and y are integers such that the molecular weight of the polysiloxane block is between 1000 and 5000,

a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0.

4. The use as claimed in at least one of claims 1 to 3, wherein (a) is at least one (meth)acrylate.

5. The use as claimed in at least one of claims 1 to 4, wherein

(a) is chosen from the group consisting of

(a1) tert-butyl acrylate and

(a2) methacrylic acid.

6. The use as claimed in at least one of claims 1 to 5, wherein

(a) amounts to 50 to 99.9% by weight and

(b) amounts to 0.1 to 50% by weight,

with the proviso that the fractions add up to 100%.

7. The use as claimed in at least one of claims 1 to 5, wherein

(a1) amounts to 49.5 to 99% by weight

(a2) amounts to 0.5 to 40% by weight

(b) amounts to 0.5 to 20% by weight,

with the proviso that the fractions add up to 100%.

8. The use of an addition polymer as claimed in at least one of claims 1 to 7 as film former, coating agent and/or binder in pharmaceutical preparations.

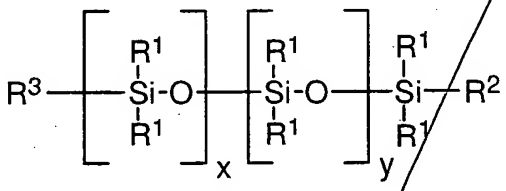
9. A preparation comprising

SUB A7

polymer obtainable by free-radical polymerization of a monomer mixture of

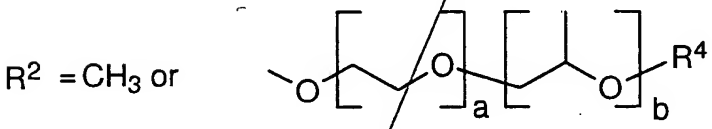
(a) ethylenically unsaturated monomers

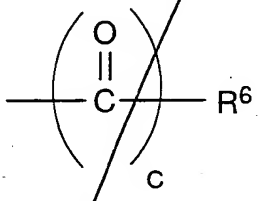
(b) polyalkylene oxide-containing silicone derivatives of the formula



(I)

where:





R^6 is an organic radical having 1 to 40 carbon atoms which can contain amino, carboxylic acid or sulfonate groups, or, for the case c=0, is also the anion of an inorganic acid,

and where the radicals R^1 may be identical or different, and either originate from the group of aliphatic hydrocarbons having 1 to 20 carbon atoms, are cyclic aliphatic hydrocarbons having 3 to 20 carbon atoms, are of an aromatic nature or are identical to R^5, where:

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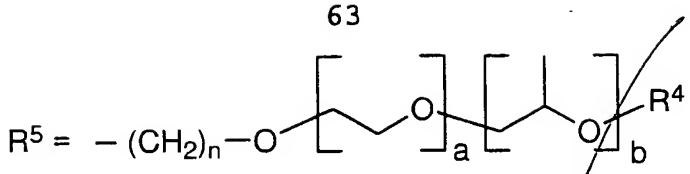


with the proviso that at least one of the radicals R^1, R^2 or R^3 is a polyalkylene oxide-containing radical according to the above definition,

and n is an integer from 1 to 6,
x and y are integers such that the molecular weight of the polysiloxane block is between 300 and 30,000,
a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0, and c is 0 or 1.

- further polymer, chosen from the group formed from
  polyvinylpyrrolidones;
  polyvinylcaprolactams;
  polyurethanes;
  copolymers of acrylic acid, methyl methacrylate, octylacrylamide, butylaminoethyl methacrylate and hydroxypropyl methacrylate;
  copolymers of tert-butyl acrylate, ethyl acrylate and methacrylic acid;
  copolymers of ethyl acrylate and methacrylic acid;
  copolymers of N-tert-butylacrylamide, ethyl acrylate and acrylic acid;
  copolymers of vinyl acetate and crotonic acid and/or (vinyl) neodecanoate;
  copolymers of vinyl acetate and/or vinyl propionate and N-vinylpyrrolidone.

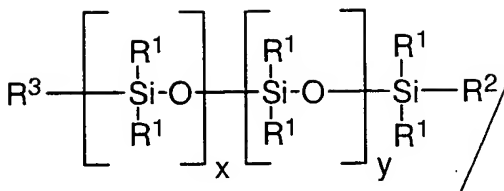
SUB C17

10. A preparation comprising

- polymer obtainable by free-radical polymerization of a monomer mixture of

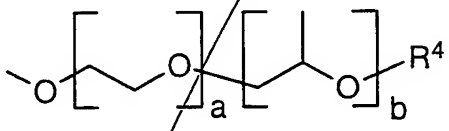
  (a) ethylenically unsaturated monomers

  (b) polyalkylene oxide-containing silicone derivatives of formula

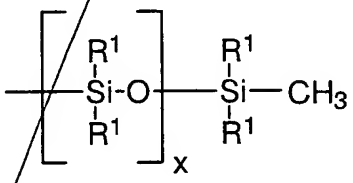


(I)

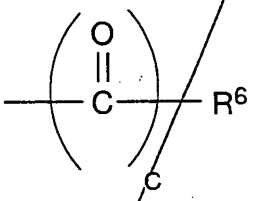
where:

$R^2 = CH_3$ or 

$R^3 = CH_3$ or R^2

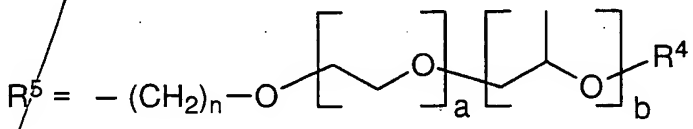
$R^4 = H, CH_3,$ 

SUB R7



R^6 is an organic radical having 1 to 40 carbon atoms which can contain amino, carboxylic acid or sulfonate groups, or, for the case c=0, is also the anion of an inorganic acid,

and where the radicals R^1 may be identical or different, and either originate from the group of aliphatic hydrocarbons having 1 to 20 carbon atoms, are cyclic aliphatic hydrocarbons having 3 to 20 carbon atoms, are of an aromatic nature or are identical to R^5, where:

$R^5 =$ 

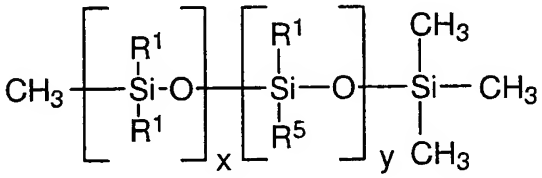
with the proviso that at least one of the radicals R^1, R^2 or R^3 is a polyalkylene oxide-containing radical according to the above definition,

and n is an integer from 1 to 6,

x and y are integers such that the molecular weight of the polysiloxane block is between 300 and 30,000,
a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0, and c is 0 or 1.

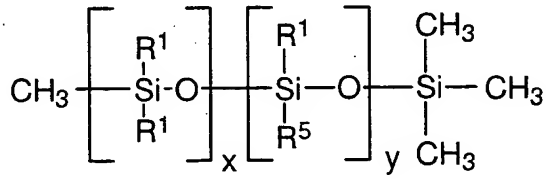
- UV light protection filters.

11. A preparation as claimed in claim 10, wherein formula I has the following meaning



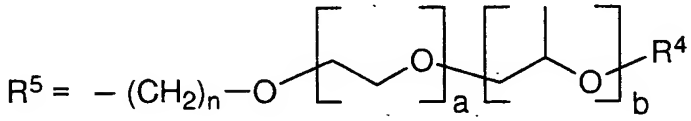
where R^1 and R^5 have the meanings given in claim 10.

12. A preparation as claimed in claim 11, wherein formula I has the following meaning



where

$R^1 = -CH_3$



$R^4 = -H$; $-COCH_3$, alkyl with C_1-C_4

n = 1 to 6, in particular 2 to 4

x and y are integers such that the molecular weight of the polysiloxane block is between 1000 and 5000,

a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0.

13. A preparation as claimed in at least one of claims 9 to 12, wherein (a) is at least one (meth)acrylate.

14. A preparation as claimed in at least one of claims 9 to 13, wherein (a) is chosen from the group consisting of

(a1) tert-butyl acrylate

(a2) methacrylic acid.

15. A preparation as claimed in at least one of claims 9 to 14, wherein the addition polymer is obtainable from

(a) 50 to 99.9% by weight and

(b) 0.1 to 50% by weight

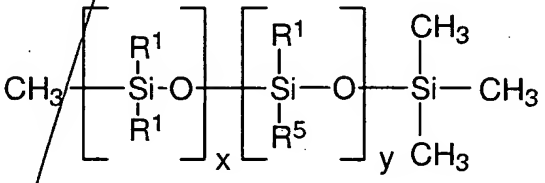
with the proviso that the fractions add up to 100%.

16. A preparation as claimed in at least one of claims 9 to 15, wherein the addition polymer is obtainable from

(a1) 49.5 to 99% by weight of a (meth)acrylate

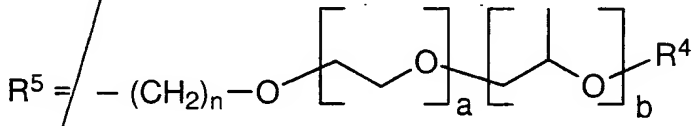
(a2) 0.5 to 40% by weight of another (meth)acrylate

(b) 0.5 to 20% by weight of a silicone derivative according to the following formula:



where

R^1 = $-CH_3$



R^4 = -H; $-COCH_3$, alkyl with C_1-C_4

n = 1 to 6, in particular 2 to 4

x and y are integers such that the molecular weight of the polysiloxane block is between 1000 and 5000,

a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0,

with the proviso that the fractions add up to 100%.

17. The use of the preparations as claimed in at least one of claims 9 to 16 in pharmaceutical preparations.

18. The use of the preparations as claimed in at least one of claims 9 to 16 in cosmetic preparations.

19. The use as claimed in claim 18 in nail care compositions.

20. The use as claimed in claim 18 in preparations for decorative cosmetics.

21. The use as claimed in claim 20 in nail varnishes.

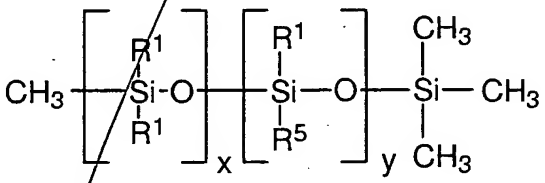
22. The use of the preparations as claimed in at least one of claims 9 to 16 as film formers.

23. The use of an polymer obtainable by free-radical polymerization of a monomer mixture of

(a1) (meth)acrylate

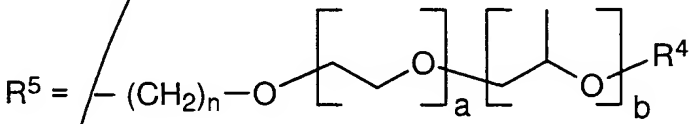
(a2) another (meth)acrylate

(b) silicone derivative according to the following formula



where

$R^1 = -CH_3$



R^4 = -H; $-COCH_3$, alkyl with C_1-C_4

n = 1 to 6, in particular 2 to 4

x and y are integers such that the molecular weight of the polysiloxane block is between 1000 and 5000,

a, b may be integers between 0 and 50, with the proviso that the sum of a and b is greater than 0,

in preparations for decorative cosmetics.